

Администрирование сетевых подсистем

Лабораторная работа №14

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2025

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Цель работы

Основная цель

Получение практических навыков настройки файловых служб Samba и разграничения доступа пользователей к общим ресурсам.

Ход выполнения

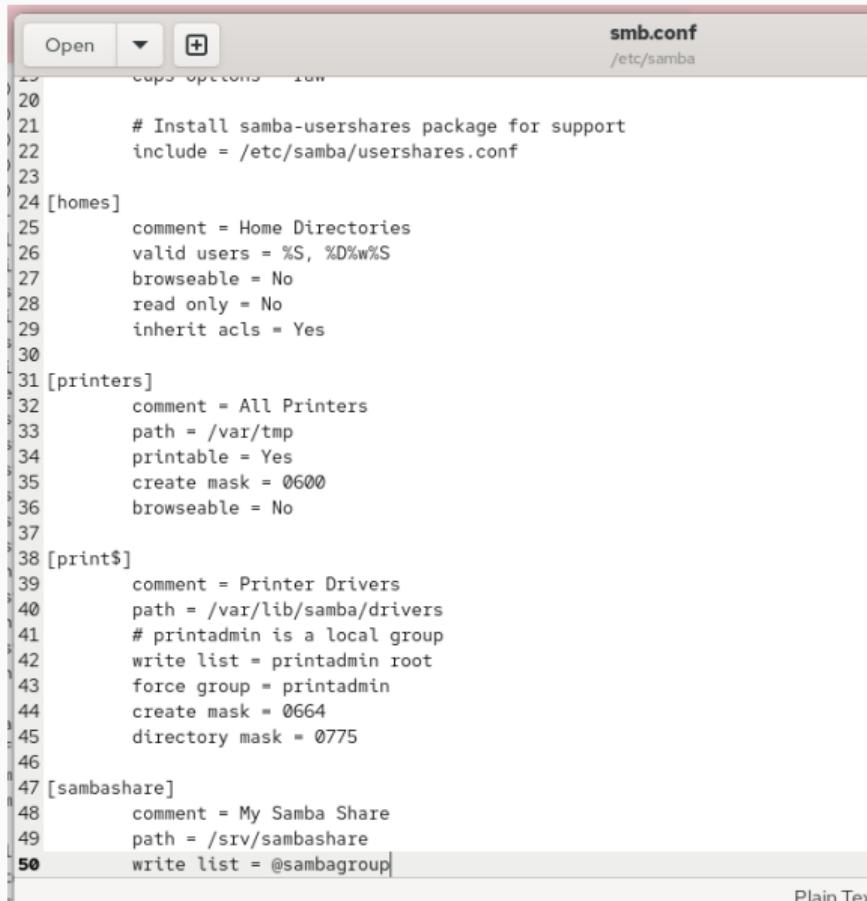
Установка пакетов и подготовка каталога

```
Installed:
  cifs-utils-7.2-1.el10.x86_64          libnetapi-4.22.4-106.el10.x86_64
  samba-client-4.22.4-106.el10.x86_64    samba-common-tools-4.22.4-106.el10.x86_64
  samba-ldb-ldap-modules-4.22.4-106.el10.x86_64  samba-libs-4.22.4-106.el10.x86_64
                                             samba-dcerpc-4.22.4-106.el10.x86_64

Complete!
[root@server.dgavdadaev.net server]# groupadd -g 1010 sambagroup
[root@server.dgavdadaev.net server]# usermod -aG sambagroup dgavdadaev
[root@server.dgavdadaev.net server]# mkdir -p /srv/sambashare
[root@server.dgavdadaev.net server]# █
```

Рис. 1: Установка пакетов Samba

Настройка smb.conf



The screenshot shows a text editor window titled "smb.conf /etc/samba". The file contains a configuration for a Samba server. The configuration includes sections for [homes], [printers], [print\$], and [sambashare]. The [print\$] section is currently selected. The [sambashare] section at the bottom is highlighted with a light blue background. The code is numbered from 15 to 50 on the left side.

```
15
16
17
18
19
20
21     # Install samba-usershare package for support
22     include = /etc/samba/usershares.conf
23
24 [homes]
25     comment = Home Directories
26     valid users = %S, %D%w%S
27     browseable = No
28     read only = No
29     inherit acls = Yes
30
31 [printers]
32     comment = All Printers
33     path = /var/tmp
34     printable = Yes
35     create mask = 0600
36     browseable = No
37
38 [print$]
39     comment = Printer Drivers
40     path = /var/lib/samba/drivers
41     # printadmin is a local group
42     write list = printadmin root
43     force group = printadmin
44     create mask = 0664
45     directory mask = 0775
46
47 [sambashare]
48     comment = My Samba Share
49     path = /srv/sambashare
50     write list = @sambagroup
```

Запуск службы и проверка

```
[root@server.dgavdadaev.net server]#  
[root@server.dgavdadaev.net server]# systemctl start smb.service  
[root@server.dgavdadaev.net server]# systemctl enable smb.service  
Created symlink '/etc/systemd/system/multi-user.target.wants/smb.service' → '/usr/lib/systemd/system/smb.service'.  
[root@server.dgavdadaev.net server]# systemctl status smb.service  
● smb.service - Samba SMB Daemon  
   Loaded: loaded (/usr/lib/systemd/system/smb.service; enabled; preset: disabled)  
     Active: active (running) since Sat 2025-12-06 08:51:06 UTC; 14s ago  
   Invocation: 98900b55d85449e0aae1f66389630fd7  
     Docs: man:smbd(8)  
           man:samba(7)  
           man:smb.conf(5)  
   Main PID: 16146 (smbd)  
     Status: "smbd: ready to serve connections..."  
       Tasks: 3 (limit: 10278)  
     Memory: 13.5M (peak: 13.8M)  
       CPU: 30ms  
      CGroup: /system.slice/smb.service  
              ├─16146 /usr/sbin/smbd --foreground --no-process-group  
              ├─16149 /usr/sbin/smbd --foreground --no-process-group  
              └─16150 /usr/sbin/smbd --foreground --no-process-group  
  
Dec 06 08:51:06 server.dgavdadaev.net systemd[1]: Starting smb.service - Samba SMB Daemon...  
Dec 06 08:51:06 server.dgavdadaev.net systemd[1]: Started smb.service - Samba SMB Daemon.  
[root@server.dgavdadaev.net server]# smbclient -L //server  
Password for [DGAVDADAEV-NET\root]:  
Anonymous login successful  
  
      Sharename          Type        Comment  
      -----          ----        -----  
      print$            Disk        Printer Drivers  
      sambashare        Disk        My Samba Share  
      IPC$              IPC         IPC Service (Samba 4.22.4)  
SMB1 disabled -- no workgroup available  
[root@server.dgavdadaev.net server]#
```

Рис. 3: Проверка smbclient

Правила firewalld и SELinux

```
[root@server.dgavdadaev.net server]#  
[root@server.dgavdadaev.net server]# firewall-cmd --add-service=samba  
success  
[root@server.dgavdadaev.net server]# firewall-cmd --add-service=samba --permanent  
success  
[root@server.dgavdadaev.net server]# firewall-cmd --reload  
success  
[root@server.dgavdadaev.net server]# chgrp sambagroup /srv/sambashare/  
[root@server.dgavdadaev.net server]# chmod g=rwx /srv/sambashare/  
[root@server.dgavdadaev.net server]# cd /srv  
[root@server.dgavdadaev.net srv]# ls -Z  
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:var_t:s0 sambashare  
[root@server.dgavdadaev.net srv]# semanage fcontext -a -t samba_share_t "/srv/sambashare(/.*)?"  
[root@server.dgavdadaev.net srv]# restorecon -vR /srv/sambashare/  
Relabeled /srv/sambashare from unconfined_u:object_r:var_t:s0 to unconfined_u:object_r:samba_share_t:s0  
[root@server.dgavdadaev.net srv]# ls -Z  
unconfined_u:object_r:nfs_t:s0 nfs unconfined_u:object_r:samba_share_t:s0 sambashare  
[root@server.dgavdadaev.net srv]# setsebool samba_export_all_rw 1  
[root@server.dgavdadaev.net srv]# setsebool samba_export_all_rw 1 -P  
[root@server.dgavdadaev.net srv]# █
```

Рис. 4: Настройки firewall и SELinux

Добавление пользователя

```
[root@server.dgavdadaev.net srv]#  
[root@server.dgavdadaev.net srv]# smbpasswd -L -a dgavdadaev  
New SMB password:  
Retype new SMB password:  
Added user dgavdadaev.  
[root@server.dgavdadaev.net srv]# █
```

Рис. 5: Добавление SMB-пользователя

Установка и настройка

```
Installed:
  cifs-utils-7.2-1.el10.x86_64           samba-client-4.22.4-106.el10.x86_64

Complete!
[root@client.dgavdadaev.net client]# less /usr/lib/firewalld/services/samba-client.xml
[root@client.dgavdadaev.net client]#
[root@client.dgavdadaev.net client]# firewall-cmd --add-service=samba-client
success
[root@client.dgavdadaev.net client]# firewall-cmd --add-service=samba-client --permanent
success
[root@client.dgavdadaev.net client]# firewall-cmd --reload
success
[root@client.dgavdadaev.net client]# groupadd -g 1010 sambagroup
[root@client.dgavdadaev.net client]# usermod -aG sambagroup dgavdadaev
[root@client.dgavdadaev.net client]#
```

Рис. 6: Установка клиента

Проверка smbclient

```
[root@client.dgavdadaev.net client]#  
[root@client.dgavdadaev.net client]# smbclient -L //server  
Password for [DGAVDADAEV-NET\root]:  
Anonymous login successful  
  
      Sharename          Type          Comment  
      -----          ----          -----  
      print$            Disk          Printer Drivers  
      sambashare        Disk          My Samba Share  
      IPC$              IPC           IPC Service (Samba 4.22.4)  
SMB1 disabled -- no workgroup available  
[root@client.dgavdadaev.net client]# smbclient -L //server -U dgavdadaev  
Password for [DGAVDADAEV-NET\dgavdadaev]:  
  
      Sharename          Type          Comment  
      -----          ----          -----  
      print$            Disk          Printer Drivers  
      sambashare        Disk          My Samba Share  
      IPC$              IPC           IPC Service (Samba 4.22.4)  
      dgavdadaev       Disk          Home Directories  
SMB1 disabled -- no workgroup available  
[root@client.dgavdadaev.net client]#
```

Рис. 7: Просмотр ресурсов

Монтирование SMB-ресурса

```
[root@client.dgavdadaev.net client]# mkdir /mnt/samba
[root@client.dgavdadaev.net client]# mount -o username=dgavdadaev,user,rw,uid=dgavdadaev,gid=sambagroup
//server/sambashare /mnt/samba/
Password for dgavdadaev@//server/sambashare:
mount: (hint) your fstab has been modified, but systemd still uses
      the old version; use 'systemctl daemon-reload' to reload.
[root@client.dgavdadaev.net client]# mount | grep mnt
server.dgavdadaev.net:/srv/nfs on /mnt/nfs type nfs4 (rw,relatime,vers=4.2,rsize=262144,wsize=262144,namelen=255,hard,proto=tcp,timeo=600,retrans=2,sec=sys,clientaddr=192.168.1.30,local_lock=none,addr=192.168.1.1)
server.dgavdadaev.net:/srv/nfs/home/dgavdadaev on /mnt/nfs/home/dgavdadaev type nfs4 (rw,relatime,vers=4.2,rsize=262144,wsize=262144,namelen=255,hard,proto=tcp,timeo=600,retrans=2,sec=sys,clientaddr=192.168.1.30,local_lock=none,addr=192.168.1.1)
//server/sambashare on /mnt/samba type cifs (rw,nosuid,nodev,noexec,relatime,vers=3.1.1,cache=strict,username=dgavdadaev,uid=1001,forceuid,gid=1010,forcegid,addr=192.168.1.1,file_mode=0755,dir_mode=0755,soft,nounix,serverino,mapposix,reparse=nfs,rsize=4194304,wsize=4194304,bsize=1048576,retrans=1,echo_interval=60,actimeo=1,closetimeo=1,user)
[root@client.dgavdadaev.net client]#
```

Рис. 8: Монтирование SMB

Тестирование записи

```
[dgavdadaev@client.dgavdadaev.net dgavdadaev]$  
[dgavdadaev@client.dgavdadaev.net dgavdadaev]$ cd /mnt/samba/  
[dgavdadaev@client.dgavdadaev.net samba]$ ls  
dgavdadaev@server.txt  
[dgavdadaev@client.dgavdadaev.net samba]$ touch dgavdadaev@client.txt  
[dgavdadaev@client.dgavdadaev.net samba]$ ls -l  
total 0  
-rwxr-xr-x. 1 dgavdadaev sambagroup 0 Dec 6 09:09 dgavdadaev@client.txt  
-rwxr-xr-x. 1 dgavdadaev sambagroup 0 Dec 6 08:56 dgavdadaev@server.txt  
[dgavdadaev@client.dgavdadaev.net samba]$ █
```

Рис. 9: Создание файла на клиенте

Файл учётных данных и fstab

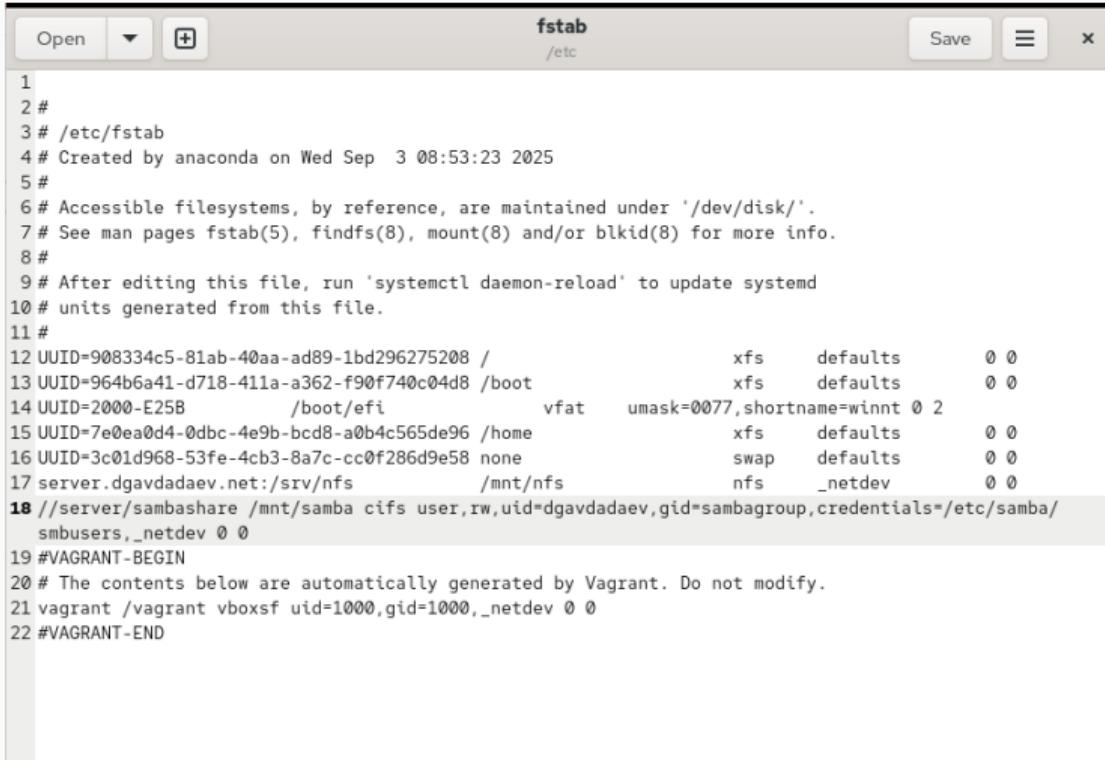


The screenshot shows a terminal window with a dark background. At the top, there is a toolbar with three buttons: 'Open' (with a downward arrow), a standard file icon, and a plus sign icon. To the right of the toolbar, the text 'smbusers' and '/etc/samba' is displayed. The main area of the terminal contains two lines of text:

```
1 username=dgavdadaev  
2 password=123456
```

Рис. 10: Файл smbusers

Файл учётных данных и fstab



The screenshot shows a file editor window titled "fstab" with the path "/etc" at the top right. The window has standard buttons for "Open", "Save", and close. The file content is a list of file system entries, each starting with a line number (1 through 22) followed by the mount point, file system type, options, and flags. Line 18 is highlighted with a light grey background, indicating it is the current selection.

```
1
2 #
3 # /etc/fstab
4 # Created by anaconda on Wed Sep 3 08:53:23 2025
5 #
6 # Accessible filesystems, by reference, are maintained under '/dev/disk/'.
7 # See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.
8 #
9 # After editing this file, run 'systemctl daemon-reload' to update systemd
10 # units generated from this file.
11 #
12 UUID=908334c5-81ab-40aa-ad89-1bd296275208 / xfs defaults 0 0
13 UUID=964b6a41-d718-411a-a362-f90f740c04d8 /boot xfs defaults 0 0
14 UUID=2000-E25B /boot/efi vfat umask=0077,shortname=winnt 0 2
15 UUID=7e0ea0d4-0dbc-4e9b-bcd8-a0b4c565de96 /home xfs defaults 0 0
16 UUID=3c01d968-53fe-4cb3-8a7c-cc0f286d9e58 none swap defaults 0 0
17 server.dgavdadaev.net:/srv/nfs /mnt/nfs nfs _netdev 0 0
18 //server/sambashare /mnt/samba cifs user,rw,uid=dgavdadaev,gid=sambagroup,credentials=/etc/samba/
    smbusers,_netdev 0 0
19 #VAGRANT-BEGIN
20 # The contents below are automatically generated by Vagrant. Do not modify.
21 vagrant /vagrant vboxsf uid=1000,gid=1000,_netdev 0 0
22 #VAGRANT-END
```

Рис. 11: fstab

Итоги

Основные результаты

- Развёрнут Samba-сервер на Rocky Linux.
- Настроены firewall, SELinux и права доступа.
- Созданы пользователь и SMB-учётная запись.
- Настроен клиент: smbclient, CIFS-мониторинг, автоматизация через fstab.
- Подготовлены provisioning-скрипты для автоматического развёртывания.